



REPORT

BY THE

MEDICAL OFFICER OF HEALTH

OF THE

BOROUGH OF LOWESTOFT,

FOR THE YEAR

1896.

CONTAINING ALSO THE

ANNUAL REPORT

FOR THE

LOWESTOFT

PORT SANITARY DISTRICT.

LOWESTOFT;

PRINTED BY W. GWYN, LONDON ROAD.



REPORT

BY THE

MEDICAL OFFICER OF HEALTH

OF THE

BOROUGH OF LOWESTOFT,

FOR THE YEAR

1896.

CONTAINING ALSO THE

ANNUAL REPORT

FOR THE

LOWESTOFT

PORT SANITARY DISTRICT.

To the Chairman and Members of the Sanitary
Committee of the Corporation of Lowestoft.

Gentlemen,

I have the honour to submit herewith my Report upon the Health of the Borough and Port of Lowestoft for the past year, and at the same time to congratulate you upon the improved Sanitary condition of the Borough, as evidenced by the very low death rate from all causes; the rate for 1896, will be found to be the lowest on record for this Borough. The town water supply has been greatly improved, and when you obtain the control of the Waterworks by Act of Parliament you will be able to complete the good work already well begun.

I would wish more especially to direct your attention to the remarks under the headings Enteric Fever, Diphtheria, and Baths and Wash Houses.

For the first time a short Meteorological Report appears.

I have the honour to be, Gentlemen,

Your obedient servant,

JOHN TUBB THOMAS,

L.R.C.P., D.P.H. etc.,

Medical Officer of Health.

Health Department,

Town Hall,

Lowestoft,

1st February, 1897.

BOROUGH OF LOWESTOFT.

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH,

For the Year ending December 31st.

1896.

The area of the Borough of Lowestoft is 2,306 acres, and its rateable value for poor rate £90,507. The number of houses in each Ward of the Borough at the end of 1896 is shown by a table (at page 4) which has been specially prepared for me by Mr. Gage, the Borough rate collector.

Population.

At the census of 1881, the population of the Borough was 19,696, while in April, 1891, it was 23,151.

It is estimated to the middle of 1896 for the purpose of this report to be 25,590.

Marriages.

The marriages solemnized within the Borough during the year 1896 were 200 in number; compared with 205 for 1895, the average for the past ten years being 189. It must be noted that the whole of these marriages are not necessarily of residents of the Borough.

BOROUGH OF LOWESTOFT.

Return to Dr. J. T. THOMAS, Medical Officer of Health, of Number of Houses at end of December, 1896,
in the Borough, prepared by Mr. F. Gage, Borough Rate Collector.

Name of Ward.	Number of Houses, Shops, Workshops, Fish Offices, Schools, Stables &c.	Number of Cottages Rateable Value of £7 10s. and under.	Total.	Inhabited.	Uninhabited.	Total.
NORTH ...	668	1070	1738	1715	23	1738
SOUTH ...	951	639	1590	1564	26	1590
EAST ...	804	561	1365	1338	27	1365
WEST ...	878	845	1723	1706	17	1723
	3301	3115	6416	6323	93	6416

N.B. Churches and Chapels not included in this Return.

Births.

The total number of births registered in the municipal Borough during the year, was 866; 428 Males and 438 Females. This is equivalent to a birth rate of 33·8 per 1000 inhabitants, per annum as compared with 33·8 in the previous year. Of the births 27 were illegitimate (14 males and 13 females) or 31 per 1000 of the total births as compared with 40 last year and 25·6 in 1894. The total number of births, shows an increase over last year, when 850 births were registered; but the birth rate is still below the average of the last 20 years, which has been 35·8. In 1894 there were 37 more males than females born; 1895, the case was reversed, there being 28 more females than males. In 1896 there were 10 more females than males. The "Natural increase" of the population, or excess of births over deaths, amounts to 524 as compared with 295 in 1895. The birth rate in England and Wales in 1896 was 29·7 per 1000 of the population, which is lower than the rate in any other year on record excepting 1894, and 1·3 per 1000 below the mean rate in the ten years 1886-95.

TABLE II.

Birth rates of Lowestoft since 1876.

1876	34·7	1881	38·8	1886	37·9	1891	33·0
1877	35·6	1882	37·2	1887	37·1	1892	31·7
1878	36·6	1883	36·0	1888	35·5	1893	33·0
1879	35·4	1884	39·0	1889	36·2	1894	33·7
1880	37·5	1885	35·4	1890	33·9	1895	33·8
Means.	35·9		37·2		36·1		33·0

The average for the whole period of 20 years was 35·6. Lowestoft is not alone with a decreasing birth rate, as it has been steadily decreasing throughout England and Wales.

Deaths.

Three hundred and forty two (342) deaths were registered in the Borough during 1896; one hundred and sixty were males, one hundred and eighty two females. The total number in 1895, was 555. There is thus a decrease of 213. I append a table giving the number of deaths and the death rates for the past twenty one years, it will be seen that the death rate for 1896 of 12.7 per 1000 of the population, is the lowest recorded, and compares most favourably with the rate for 1895 and with the rate for the 33 large towns of England and Wales, which was 18.9. The rate for the lowest of the 33 large Towns was 14.2 for Croydon and the highest 22.7 for Liverpool. The death rate for the whole of England and Wales in 1896 was 17.1 per 1000, and this is lower than the rate in any previous year excepting 1894; compared with the rate in the ten years 1886-95, the death rate in 1896 shows decrease of 1.7 per 1000.

TABLE III.

Death-Rate of Lowestoft for 21 years.

1875	17.1	1880	15.3	1885	15.7	1891	16.25
1876	14.5	1881	12.9	1886	17.5	1892	16.89
1877	14.5	1882	14.0	1887	17.1	1893	18.76
1878	16.4	1883	16.0	1888	15.7	1894	12.93
1879	16.6	1884	15.4	1889	15.2	1895	20.6
				1890	16.17	1896	12.7

Average Death-rate for 21 years 15.5 per 1000 per annum.

Note—Too much dependance should not be placed on the above rates as they were in some years estimated upon a population considerably above the actual: the middle of 1889 being estimated at 23,440; whilst the population at the census of 1891 was only 23,151, thus some of the rates appear more favourable than they actually were.

TABLE IV.
Deaths at different Ages.

	1st Quarter.	2nd Quarter.	3rd. Quarter.	4th Quarter.	Totals.
Under 1 year ...	23	24	27	34	108
1 and under 5 ...	12	6	4	11	33
5 and under 15 ...	7	3	5	3	18
15 „ „ 25 ...	3	4	2	5	14
25 „ „ 65 ...	23	15	14	28	80
65 and over ...	20	17	18	34	89
Totals ...	88	69	70	16	342

Of the registered deaths in 1895, there were 16 among persons not residents of the Borough.

The death rate for 1896 is 13·2 per 1000 of the estimated population, the “corrected rate,” after deducting non-residents, and bodies which were picked up at sea and landed here, is 12·7 per 1000.

The death rate for the whole of England and Wales for 1896 was 17·1 per 1000.

TABLE V.
Deaths as to Locality.

	Population.	Total Deaths.	Corrected Deaths.	Corrected rate for 1896.	Corrected Rate for 1897.
North Ward...	7233	92	90	12·4	26·15
South „	5852	69	63	10·7	13·98
East „	5200	55	52	10·0	18·62
West „	7295	109	108	14·8	22·13
Totals ...	25590	325	313		

In addition to the above deaths there were 2 deaths at the Sanatorium, 10 at the Lowestoft Hospital and 5 in the Port district.

There were 16 deaths registered as occurring among persons not resident in the borough.

Corrected death-rate for the whole borough—12·7.

Infantile Mortality.

The deaths of children under 1 year were 108 as compared with 157 in 1895. The rate of infant deaths per 1000 births was 124, as compared with 220 in 1893, and 92 in 1894, and 184 in 1895. The mean average rate for all England and Wales for 1896 was 148 per 1000 births, with which our rate compares very favourably. I have prepared a table showing the death rate of children under 1 one year, for the past twenty years.

TABLE VI.

Death rate of children in Lowestoft under 1 year per 1000 Births.

1875	152	1880	163	1885	121	1890	137
1876	133	1881	112	1886	153	1891	136
1877	108	1882	115	1887	135	1892	133
1878	148	1883	138	1888	138	1893	220
1879	105	1884	147	1889	130	1894	92
						1895	184
Averages 129		135		135		150	

Rate for 1896, 124. Average for 2 years, 139. Mean rate for England and Wales in the 10 years 1886-95 was 148 per 1000 Births.

Note at foot of table 2 applies to this and other tables.

The number of deaths recorded was considerably less than for 1895 which was one of the worst years on record for the borough, an absence of deaths from Measles, and Diarrhoea was the cause of the great decrease.

It has been often said that the Insurance of young children has a great influence on the infantile death rate, I have ascertained that of the 141 deaths among children under 5 years of age, in this Borough during 1896 in only 41 instances were the children Insured.

Old People.

The deaths among old people of 65 and upwards were 89, which gives a rate of 3.5 per 1000 of the estimated population. The larger proportion of these deaths occurred in the last quarter of the year and were largely due to the inclement weather.

Twenty one of those dying were over 80 years of age (5 were over 90 years of age), the combined ages of the 89 persons amounted to 6515 years, giving a mean age of 73·2 years.

Phthisis & other Respiratory Disease.

The deaths from chest affections were as follows:—

Phthisis--24, including 2 Visitors. Bronchitis, Pneumonia and Pleurisy 44, including 3 visitors. The death-rate from Phthisis being 0·93 per 1000, that from the other three chest diseases being 1·67. The death-rate from Phthisis is lower than that for 1893 and 1894, but a slight increase on that for 1895, and the mean rate for the past ten years has been 0·92 per 1000, in the Borough. The decrease is very satisfactory, and shows the great advantage of a residence in this town for those who are predisposed to this disease.

The following are the death rates from Phthisis, of a few of the leading sea side Health resorts,

TABLE VII.

Eastbourne, 4 years average	...	...	1·05
Southport, 5 „ „	...	...	1·49
Brighton, 5 „ „	...	...	1·54
Bournemouth 4 „ „	...	...	3·27
Hastings last year	...	...	1·97
Scarborough 5 „ „	...	...	1·44
Lowestoft 6 „ „	...	...	0·92

(This table with the exception of the Lowestoft figures is taken from the “Scarborough Post.”)

The death-rate per 1000 from Bronchitis, Pneumonia, and Pleurisy in Lowestoft is 1·16 as compared with 2·38 for 1895, 1·50 for 1894, and 1·56 for 1893. Of the deaths from Phthisis three were under 5 years of age. Of the deaths from Bronchitis &c., 20 were under five years of age.

Heart Diseases.

The deaths from Heart affections were 37 as compared with 33 in 1895, and 34 in 1894; the average for the past ten years has been a little over 28 per annum. The death rate from Heart affections for 1896 was 1·44 per 1000, of the total population per annum.

Injuries.

There have been 13 deaths from violence as compared with 31 in 1895 and 16 in 1894 the average for the past ten years has been a little over 12 per annum.

Deaths from Zymotic Diseases.

The deaths from the seven principal Zymotic diseases were 39 (as compared with 166 for 1895, and 107 during 1893,) this gives a rate of 1.52 per 1000 living for 1896, as compared with a rate of 6.59 for the year 1895 for this borough, and a rate of 2.18 per 1000 living for the whole of England and Wales during the year 1896. Further reference will be found in the second part of this report, to the origin and incidence of these diseases.

TABLE VIII.

Giving the rate of Mortality from the 7 Principal Zymotic Diseases in Lowestoft in the year 1896.

Disease.	Total.	Rate per 1000. of Population.
Small Pox		
Scarlet Fexer	1	0.039
Measles	2	0.078
Whooping Cough ...	17	0.664
Diphtheria	10	0.390
Enteric Fever	4	0.156
Diarrhoea	5	0.195
Totals.	39	1.522

Besides the above there were three deaths registered from Puerperal Fever, one from Erysipelas, and 1 from Influenza. There was a very marked decrease in the number of deaths from Zymotic diseases as compared with 1895, when the total number was 166 from the principal diseases, and 35 from other Zymotic diseases including 30 from Influenza. During 1895 there were 74 deaths from Measles, 16 from Whooping Cough, 12 from Diphtheria, 8 from Enteric Fever and 55 from Diarrhoea. In part II. I shall treat more fully upon the incidence of Zymotic disease in the borough in 1896.

TABLE IX.

ANNUAL DEATH-RATES per 1000 from ALL CAUSES, and from several ZYMOTIC DISEASES,
during the year 1896.

		All Causes	Principal Zymotic Diseases, Cols. 3-9	Small-pox.	Measles.	Scarlet Fever.	Diphtheria.	Whooping cough.	Fever.	Diar-rhoea.	Deaths under 1 Year per 1000 Births.
	Cols.	1.	2.	3	4.	5.	6.	7.	8.	9.	10.
England and Wales	..	171	218	0.02	0.56	0.18	0.29	0.41	0.17	0.55	148
33 Great Towns	..	189	286	0.00	0.71	0.22	0.38	0.57	0.19	0.79	167
67 Other Large Towns	..	173	251	0.12	0.64	0.19	0.25	0.43	0.20	0.68	161
England and Wales, } less the 100 Towns		158	160	0.00	0.43	0.14	0.23	0.30	0.14	0.36	130
Lowestoft	..	127	152	0.00	0.07	0.03	0.39	0.66	0.15	0.19	124

The following table gives the death rate for England and Wales for nearly 60 years; it will be noticed that the rate was fairly stationary until about 1870, it has steadily dropped from 22.4 in that year to 18.7 in 1895 and 17.1 in 1896.

TABLE X.

Period.	Deaths per 1000 living.	Period.	Deaths per 1000 deaths.
1838--40	22.4	1866--70	22.4
1841--45	21.4	1871--75	22.0
1846--50	23.3	1876--80	20.8
1851--55	22.7	1881--85	19.4
1856--60	21.8	1886--90	18.9
1861--65	22.6	1891--95	18.7

This means a saving of 120,000 lives a year, or 10,000 a calendar month.

By referring to table III. on page 6 it will be observed that the rate for Lowestoft has since 1875 been about 25 per cent. under the mean death rate for England and Wales, and I am convinced that with a greater attention to sanitary improvements the present low rate could be considerably reduced.

TABLE XI.

All other Deaths.

DEATHS UNDER FIVE YEARS OF AGE.				DEATHS AT FIVE AND OVER.			
Marasmus	...	...	19	Senile-Decay	...	...	29
Premature Birth	...	...	15	Apoplexy	...	...	19
Gastro-Enteritis	...	...	11	Cirrhosis of Liver	...	...	5
Tuberculosis of Bowels	...	...	2	Cancer of Neck	...	...	2
Congenital Syphilis	...	...	6	Cancer of Bowels	...	...	4
Convulsions	...	...	16	Cancer of Bladder	...	...	1
Laryngitis	...	...	4	Cancer of Breast	...	...	1
Meningitis	...	...	7	Peritonitis	...	...	6
Jaundice	...	...	1	Kidney Diseases	...	...	7
Dyspepsia	...	...	2	Paralysis	...	...	6
Cancer of Kidney	...	...	1	Ovarian Disease	...	...	1
				Septicemia	...	...	2
				Child-birth	...	...	4
				Exophthalmic Goitre	...	...	1
				Spinal Curvature	...	...	1
				Alcoholism	...	...	4
				Meningitis	...	...	2
				Gangrene	...	...	1
				Syphilis	...	...	1
				Ulcer of Leg	...	...	1
			84				98

PART 2.

STATISTICS OF REPORTED CASES OF SICKNESS.

Zymotic Diseases.

During the year 182 cases of infectious diseases were reported by the Medical practitioners, under the Infectious Diseases Notification Act of 1889, as compared with 124, during 1895, and 171, during 1894, and 295 during 1893, and an average annual rate of 155 since the adoption of the Act. Measles was added to the list of notifiable diseases for the first time in 1896, and 24 cases were notified.

The Quarterly distribution of cases of Zymotic diseases was as under.

TABLE XII.

1st Quarter	...	...	62
2nd „	...	...	42
3rd „	...	...	48
4th „	...	...	30
			<hr/> 182

The localities in which these cases occurred are shown in the following table, with the general death-rate, and the sickness rate from the notified diseases for each Ward.

TABLE XIII.

Locality.	Estimated Population.	Total reported cases.	Zymotic Sickness-rate per 1000.	General death rate per 1000 "corrected."
North Ward	7233	66	9.12	12.4
South Ward	5852	35	5.98	10.7
East Ward	5200	17	3.26	10.0
West Ward	7295	63	8.63	14.8
Port		1		
Totals	52590	182		12.7

The following table gives the nature of the infectious diseases which occurred in each ward, and in the Port, during the year.

TABLE XIV.

**Showing locality of Infectious diseases.
notified during 1896.**

Locality.	Small Pox.	Scarlet Fever.	Diphtheria.	Typhoid Fever.	Measles.	Erysipelas.	Puerperal Fever.	Total.
North Ward	0	23	22	11	2	6	2	66
South Ward	0	4	2	6	20	2	1	35
East Ward	0	11	0	6	0	0	0	17
West Ward	0	17	22	12	2	9	1	63
Port	0		0	1		0	0	1
Totals ...	0	55	46	36	24	17	4	182

There were 46 cases of Diphtheria notified, (exactly the same number as in 1895), Twenty-two in the North Ward and 22 in the West, Two in the South and none in the East. In 1895 the disease chiefly affected the North, East, and West Wards.

There were 36 cases of Typhoid notified as against 41 in 1895.

Scarlet Fever cases were 55 in number as compared with 19 in 1895.

Measles appears in the list for the first time and 24 cases were notified.

Although the number of notifications were considerably above those for 1895, the deaths from Zymotic diseases were very much fewer in number.

LOWESTOFT WATER, GAS & MARKET Co.

Return of Houses supplied Water, number of W.C's. and and Baths,
to 31st December, 1895.

No. of Houses without W.C's.	No. of Houses with One W C.	No. of Houses with Two W.C's.	No. of Houses with Three W.C's.	No. of Houses with Four W.C's.	No. of Houses with One Bath.	No. of Houses with Two Baths.	Total Number of Houses supplied.
2343	1657	671	74	10	219	7	4755
<div>Lowestoft,</div> <div>16th March, 1896.</div>							

This Return supplied by the Water & Gas Company for the use of Dr. Monckton Copeman, Medical Inspector
to the Local Government Board.

Small Pox.

No cases of this loathsome disease were reported during the year; and the town has escaped a visitation from this disease for many years. On looking into the vaccination returns I find there are a larger number of children each year who are unvaccinated, it is much to be regretted that the control of the vaccination of a district is not placed in the hands of the Sanitary Authority, as there would be a more rigorous application of the law. Acting under instructions from the Sanitary Committee, the Town Clerk wrote to the Rural District Council, calling their attention to the fact that the number of defaulters was increasing year by year. I am informed that there has been a slight improvement in the number vaccinated since then, but no very active steps taken to enforce the law. Vaccination is the first and only reliable line of defence against small pox. The Borough possesses no small pox hospital, and during the time wasted in building huts or procuring tents there would be no means of enforcing isolation should a case be imported by sea, or by tramps.

Scarlet Fever.

During the year 55 cases of this disease were notified. In the early part of the year the disease suddenly appeared in 4 of the public elementary schools, due to infection from the rural districts, and there was every probability of a serious epidemic if unchecked, as the Borough contains a very large number of susceptible children: I advised closure of the schools, and this, aided by rigorous isolation speedily cut the epidemic short. The disease was afterwards introduced several times during the year by visitors, but never allowed to spread beyond the first case in each instance, this was hardly to be expected. I was rather thwarted in my efforts to obtain efficient isolation by one or two of the practitioners in attendance, some of whom have yet to appreciate the value of a clean bill of health from Zymotic disease, in promoting the success of the Borough as a health resort. There were no "return" cases.

The only death from this disease occurred in a woman who contracted the disease from her children, within two days of her confinement. Puerperal scarlet fever is fatal in a very large percentage of the persons attacked.

Strict isolation is of the first importance in preventing epidemics

of this disease, Of the 55 cases notified during the year 24 were removed to the Sanatorium, I endeavoured to get every case removed, as I was not satisfied with the means of isolation at home. One case occurring in a Van on the Market square was only discovered by accident, when the child was freely desquamating, directly I heard of the case I immediately took steps to get the child removed to the Sanatorium, and I feared I should have had to apply to the Magistrates for an order for removal, but after a lot of trouble I got consent to remove the case. Another case in a public house gave me great anxiety as I could not obtain permission for removal, and the house being much frequented, and in a busy narrow street, required a lot of attention to ensue isolation. It is quite impossible to give the necessary supervision in these cases, with only one Inspector whose time is so largely taken up with drain testing and the supervision of the Refuse removal department, these latter duties are more than enough for one man.

Enteric Fever.

During the year thirty-six cases of this disease were reported out of which there were 4 deaths registered. Nineteen cases were treated in the Sanatorium with two deaths, these two cases were of a most malignant type and more resembled Typhus than Enteric Fever, five of the cases occurring in January and February (all removed to Sanatorium) were of this severe type; three of the cases were in adjoining houses and there was undoubted evidence of contagion from case to case. Some of the cases notified in the Borough had their origin outside the Borough. One case was brought in by a steamer, this case became infected in a German port, another case from a sailing ship was traceable to Shields, another case to Scarborough, another to Huddersfield, two cases to Yarmouth.

This reduces the cases originating in the Borough to thirty. Of these thirty cases, the water supply of the premises occupied, was the Company's in 23 cases, pumps (shallow wells) 7 cases, the closet arrangements were Midden privies in 21 cases, and water closets 9 cases, of these latter 5 were defective and in bad repair. The milk supply was not in my opinion at fault in any case.

TABLE.

			Reported cases.	Deaths.
1st Quarter	...	...	16	3
2nd „	...	...	6	1
3rd „	...	...	11	0
4th „	...	...	3	0
			<hr/> 36	<hr/> 4

TABLE.

Showing number of cases notified from each ward during years 1890-96.

		1890	1891	1892	1893	1894	1895	1896
North Ward	...	16	12	6	22	11	13	11
South Ward	.	4	0	2	12	2	8	7
East Ward	...	5	2	3	7	5	9	6
West Ward	...	38	9	6	22	12	10	11
Fort	... ..				4	1	0	1
Totals	... ..	63	23	17	67	31	41	36
Deaths	... ..	8	5	5	6	5	8	4

The fatal cases occurred: two in February, and one each in March and June. I have already spoken of the February cases, the March case was that of a woman who died the same day that I received the notification, the diagnosis not being completed until the previous night. The other death was an unexpected one on the 35th day from Hemorrhage.

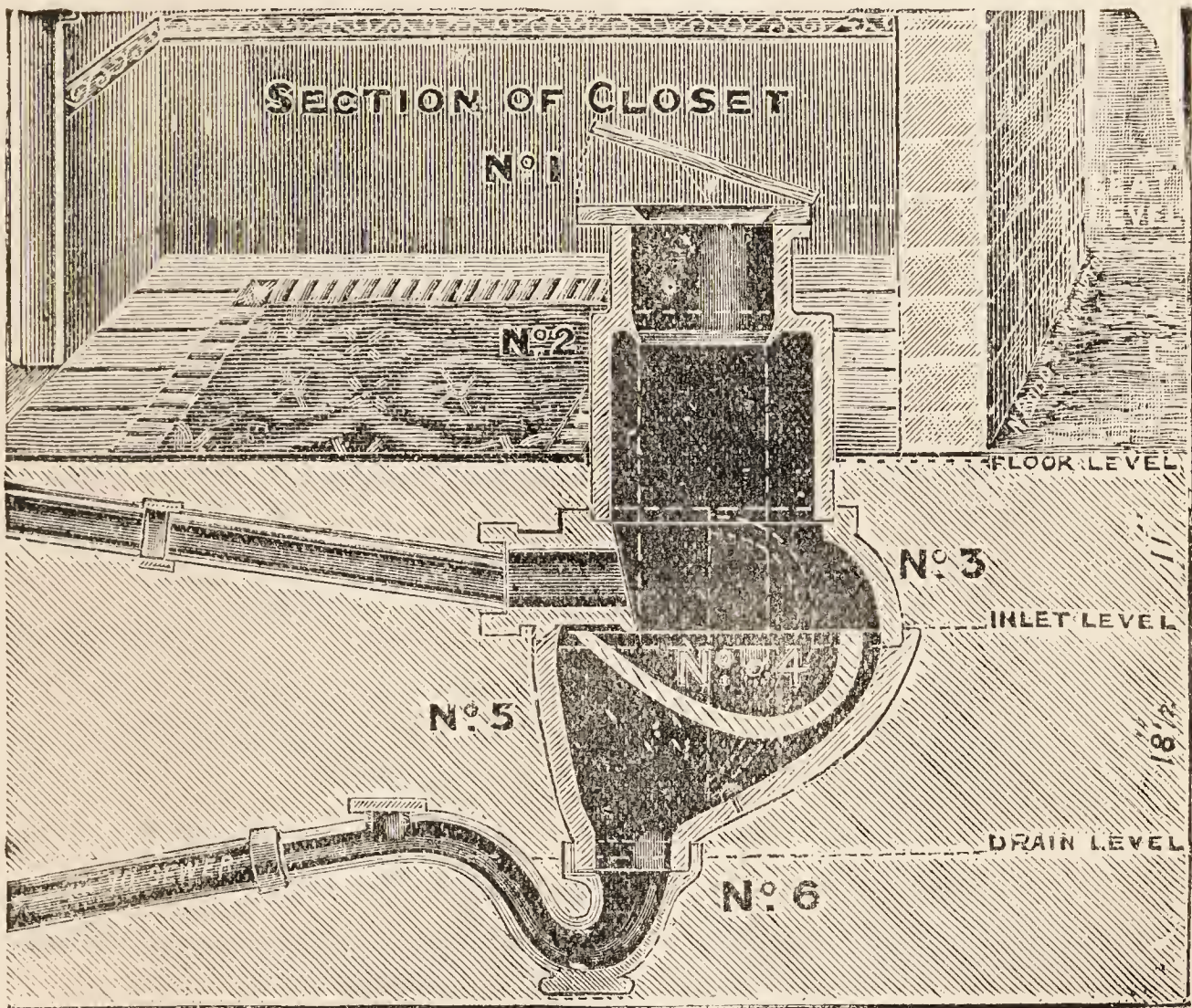
I carefully enquired myself into each case and can only come to the same conclusion that I arrived at in my report last year 1895,

and which was confirmed by Dr. Copeman in his report to the Local Government Board viz., that some of the factors in causing Enteric Fever and Diphtheria to be practically endemic in the borough are ; the privy middens, pollution of subsoil, and pollution of the shallow wells ; in my remarks upon water supply I shall deal with the latter. The death rate from Enteric Fever in the Borough for 1896 was exactly half that for 1895, but the number of cases does not show the same reduction, there having been only 5 fewer cases notified, (viz. 36 as against 41) than in 1895.

That the privy midden is a fertile source of Zymotic disease there can be no doubt, even under the most favourable circumstances, but the mischief is accentuated here by the fact that the bulk of them are only emptied once a month during 9 months of the year. Not more than one in forty is sufficiently well constructed to allow the filth to remain for this lengthened period without a certain amount of soakage into surrounding walls and soil. That the privy has such a baneful influence is well borne out by a comparison of the tables on pages 7, 14, 15 & 22, where it will be seen that higher general and Zymotic sickness and death rates prevail in the two wards (North and West) where such an enormous proportion of the houses are of £7 10s and under in rateable value, the class of property in which the privy prevails. Every case of Enteric fever that occurred in the South Ward was in a house with a privy, and in only two cases in the year in the whole borough was the disease found in properly drained houses, and in each of these cases, infection was clearly traceable to a source away from the premises.

The argument used against the conversion of the privies to water closets has been that of expense. I would much prefer proper water closets with efficient flushing apparatus should be substituted, but short of this the "waste water closet" can be fixed at a very low cost per house I give an illustration of perhaps one of the best of this kind of closet, it has the advantages of being cheap, in first cost, and fixing, not liable to get out of order, never freezing, requiring no attention, is perfectly sweet and clean, and no water rate can be charged for it. The price of the closet complete with deal seat, &c with plain trap is £1 17s. 6d. the only extra expense is cost of fixing, which should be a small item, as they are very simple and easy to fix. The makers the Sanitation Improvements Co., Wolverhampton, have kindly sent me a working model which can be seen at any time at my office.

Days Patent "Stafford Closet"



I am indebted to Dr. Parsons Asst. Medical officer of the Local Government board for a copy of his report to the Local Government Board stating the advantages of the "waste water closet." And in a subsequent letter he informs me that it was decided in *Evans v Gornall* reported in "The Times" of May 28th 1892 that water rate was not payable for this class of closet.

It is very unfortunate that Dr. Copeman's suggestion in his report to the Local Government Board has not been adopted and a "Destructor" erected to cremate the town's refuse. Nothing has been done with regard to his fourth suggestion as to increasing the number and efficiency of the ventilating shafts of the sewers. And nothing done as to the provision of means to flush the sewers during the summer months. Taking the fact into consideration that the main sewer outfall has been blocked by sand for about 17 hours every day during the year, it is marvelous that the general health of the Borough has been so good; but it is hardly to be expected that this condition can prevail for an other year without a serious outbreak of disease.

Diphtheria.

The number of cases of Diphtheria reported during the year exactly corresponded with those for 1895. The deaths from this cause were 10 in number as against 12 in 1895.

TABLE.

Showing locality of cases of Diphtheria notified in 1896.

	North Ward.	South Ward.	East Ward.	West Ward.
1st Quarter ...	13	0	0	7
2nd ,, .	3	0	0	1
3rd ,, ...	1	1	0	6
4th ,, ...	5	1	0	8
	22	2	0	22

Table showing the number of cases, and number of deaths from Diphtheria in the Borough during the past seven years.

TABLE XV.

	90	91	92	93	94	95	96
Number of cases	10	5	62	112	64	46	46
,, ,, ,,	3	2	15	18	18	12	10

The disease did not prevail in epidemic form at any time during the year and there was very little connection between the cases. Infection from schools was probable in some of the cases, though not clearly traced, and the only element common to most was the ubiquitous "privy," 34 of the houses attacked having privies, 27 of these houses having the company's water supply, and 7 being supplied by pumps from shallow wells. Twelve of the cases occurred in houses supplied by Company's water and provided with water closets. Three of these cases occurred in one house, and two in another: of the remaining seven water closet houses, the infection

was clearly traceable in three instances from without the Borough. One of these cases in the South Ward, was in a visitor's child that developed the disease the night it arrived, two of the other cases were infected by visitors' children who were brought here from London after recovering from the disease, one in the West and one in the North Ward. The lodging house keeper's child was infected by the visitor's child in each instance. That the London children were both able to infect them I was able to prove by obtaining pure cultures of the *Bacillus Diphtheriæ* from their throats, although five weeks in one case and six weeks in the other had elapsed since the local symptoms of the disease had subsided, and the children were apparently well, and played with the children they infected.

It will be observed that the water supply was identical in 39 instances, but I have no evidence this had anything whatever to do with the disease. The milk supply was most carefully inquired into in each case, but in no case did I consider it in any way implicated. Ten of the cases were removed to the Sanatorium for isolation and treatment, and all recovered, "antitoxin" having been administered. A larger number would have been taken in, but for the fact of our accommodation only allowing us to treat two different diseases at a time with safety, and when the occasion arose for isolating the diphtheria cases the pavilions were being used for typhoid and scarlet fever; when the new block is erected this difficulty will be obviated.

Measles.

After our terrible visitation in the Autumn and Winter of 1895, a few cases occurred in January and February with two deaths. After the epidemic had ceased, measles was added to the list of notifiable diseases in March, and from this date to the end of the year 24 cases were notified from nine houses, nearly all the cases being confined to the South Ward, several of the cases occurred in a private school, and thanks to early notification, steps were taken to prevent a spread of the disease through the school. In another instance all the members of a visitor's family were attacked one after another, there were no other cases in the Borough at the time, and it is probable that the infection was picked up on the crowded beach, from a number of children who came here on a cheap excursion. I am firmly convinced of the great benefit to be derived from

notification, but I think the law should be amended, so as to pay for only one certificate from each house, no other case to be notified or paid for until a period of three weeks has elapsed.

Each case was visited and instructions given for isolation at home and after recovery the bedding, clothing and premises thoroughly disinfected.

During 1896 there were registered 17,169 deaths from this cause in England and Wales, equal to a death-rate of about 0.55 per 1000 living.

Whooping Cough.

Like all other health resorts we suffer greatly from the ravages of whooping cough, no sooner is one outbreak cleared off, than another begins, the infection being re-introduced by visiting children brought here (for change of air) in the latter stages of the disease. Whooping Cough was responsible for 17 deaths in the Borough during 1896, and 12,736 children died in England and Wales during the year from this cause.

Diarrhœa.

The deaths from diarrhœa during the year were five in number, as against 55 in 1895, from inquiries I find that the sickness rate from the same cause was reduced in like proportion, this I in a large measure attribute to the vastly improved quality of the town water. By reference to the meteorological part of the report it will be seen that 56° F. the "critical" 4 feet earth temperature, considered to greatly influence the prevalence of Diarrhœa, was reached on 8th June as against the 24th June, 1895, and reached the maximum of 60.4° F on 2nd August, as against a maximum of 60.1 F. on the 9th Sept., 1895, and sank below 56° F. on 30th September, as against the 10th October, 1895.

The death rate from diarrhœa was at the rate of 0.195 per 1000, as against 2.18 per 1000 for 1895, and an average of over 0.70 per 1000 for the past 12 years. The number of deaths from this cause in England and Wales in 1896 were 17,114 or equal to a rate of about 0.55 per 1000 living; nearly one fourth of the deaths from the seven principal Zymotic diseases being attributed to this cause.

Influenza

Has not been at all prevalent during the year, and the cases were mostly of a mild character. Only one death (a lady of advanced years) was attributed to this cause.

Disinfections.

During the year 96 houses have been disinfected, and the contents of infected rooms removed to the Sanatorium for disinfection in the apparatus.

The following is a List of Articles taken for the purpose of Disinfection :—

120 beds, 93 bolsters, 37 bolster cases, 203 pillows, 125 pillow cases, 28 mattresses, 230 blankets, 126 sheets, 127 quilts, 6 curtains, 97 carpets, 9 rugs, 7 cushions, 13 towels, 5 antimacassars, 148 articles of clothing, 64 sundry articles—total 1438. In addition to the above a large quantity of bedding and clothing has been disinfected for the Rural Sanitary Authority.

Slaughter Houses.

Every slaughter house in the Borough has been visited by me frequently during the year, and the premises have been kept well limewashed, and in a sweet and clean condition. Only one of the butchers at present keeps pigs on his premises, being more than 50 feet from any dwelling house, but the widening of High Street will bring them within the proscribed distance. The butchers very loyally abided by the notice given, and before 1st March cleared off their pigs, as a result there have been no complaints of nuisances from slaughter houses during the year. One new slaughter house has been licensed during the year, this was much resented by the inhabitants of the neighbourhood, and a petition lodged against it. As sooner or later public slaughter houses will have to be erected, the fewer new premises licensed the better. Only one of the slaughter houses, viz: the last licensed, has the necessary notice affixed in accordance with sec. 170 of the Public Health Act of 1875. I am sorry to state that no bye-laws have yet been passed for the regulation of slaughter houses.

Common Lodging Houses.

These have been regularly inspected, one has been closed, and the registration of another has not been yet completed, as the necessary sanitary work has not been done. None of the houses registered are at all suitable for common lodging houses, but I hesitate to recommend their closure until more suitable premises are erected, as we are at present able to keep the tramping class under observation, and if the registered houses were closed and no new ones erected, they would be scattered about the district. It is to be hoped that the High Street improvement will be the means of new premises being erected suitable for this purpose.

Lodging Houses.

A very large percentage of the houses in the Borough are let, as furnished apartments during the summer season and a great amount of overcrowding is the result, there is a great deal of difficulty in dealing with these cases. Many of the houses that take in lodgers are quite unsuitable for the purpose. No certificates as to the sanitary condition of houses are given by the Health Department of the Borough, this is a hardship for the owners of houses in a good sanitary condition; I am of opinion that were certificates granted to houses deserving them, a great amount of good sanitary work would be done, from which the health of the town would benefit throughout the year.

Baths & Wash-houses.

During the year a large sea water swimming bath has been erected by private enterprise; there is still a crying want in the Borough for public baths. There are only 226 houses in the town (out of a total of 6323 inhabited houses) supplied with fixed baths, and there are no means in the town of obtaining a warm fresh water bath on payment. No better means of commemorating the Queen's long reign than the provision of public baths and wash-houses could be found, personal cleanliness being so essential to the well being of the people.

Water Supply.

The water supply of the town has been most carefully and thoroughly enquired into. During the early part of the year, the filtration of the town supply was not satisfactory, the latest analyses

show a decided improvement in the quality of the water. As you have a bill before parliament to acquire the works of the company, I do not purpose to go any further into this question at present.

With regard to the wells, from which at least 1000 houses at present draw their supply, a large number have been examined and the water analysed. In choosing samples, an equal number were taken from each ward, and scattered over each ward, so as to if possible arrive at an opinion as to the quality of the well water as a whole. I cannot say that any one sample examined, was free from suspicion, most being polluted with sewage and organic filth, and I am strongly of opinion that the bulk of the wells at present in use should be closed without delay. The waters vary much from one week to another, and a water that might be considered passable one week would be condemned the next week. During the year 37 wells have been closed.

Drains and Sewers.

A very large number of drains have been examined and very many found defective, some of these in houses that have been built within the past few years, the correcting of these defects has been a very heavy charge on some owners of property, and had the work been "water tested" when first put in, this great expense would have been avoided.

The beach outlet of the main sewer has been a complete wreck during the whole year and the mouth of the sewer buried in sand for about 17 hours out of every 24; having to be dug out every day. During the time that the sewer has been blocked there has been a great deal of back pressure and sewer gas has been forced out through the gullies and ventilators, I have frequently wondered during the year, how little the general health of the borough appeared to be affected, but this happy condition cannot go on for an indefinite period. It is to be hoped that the Local Government Board will come to a speedy decision and grant the loan for construction of the new sewer outlet.

There have been very frequent complaints during the year, of bad smells from the street gullies, and I cannot say the complaints were unfounded, The gullies are not of the best pattern, the water

seal not being deep enough to stand the increased pressure since so many street manholes have been closed. Besides there does not seem to be a regular system of cleansing the catch pits, and offensive material washed in from the roads, accumulates, and ferments, and gives off an offensive smell. A perforated iron basket in each gully would render the cleansing a much safer and easier plan than the present system of spooning up the filth.

Up to the present no system of flushing the drains and sewers has been adopted. If a "refuse destructor" were erected, it could be made a means of generating power for pumping sea water to different parts of the town for this purpose, and suitable automatic flushing tanks constructed at the dead ends of the sewers, &c.

Dairies and Cowsheds.

These have been regularly inspected during the year, and a number of unregistered milk shops found, have been put upon the register. In my enquiries respecting infectious diseases, I have had great difficulties in tracing the milk supplies, as there are a number of purveyors of milk in the Borough who live in the rural districts, and as they were not on our register we had no means of tracing. A small outbreak of scarlet fever appeared to me to be probably traceable to an outside milk supply, I therefore got an authority from a magistrate, under section 4 of the Infectious Disease Prevention Act, 1890, and visited the dairy but was not able to obtain any evidence implicating the milk. The system that obtains here of small general shops in the poorer part of the town, selling milk, is a dangerous one, as I have the greatest difficulty in getting the shopkeepers to keep their milk covered from dust, and I do not think that milk should be kept in open vessels in shops, containing vegetables (often with manure on the roots), fish, pork, paraffin &c.

The following account summarises some part of the Sanitary work of the year by the Inspector of Nuisances. I take this opportunity of again drawing your attention to the necessity of further help in this department, or that a man shall be appointed to attend to the drain testing, at present far too much of Mr. Kett's time is taken up with this work.

Sale of Food and Drugs Act 1875.

To the Mayor and Corporation of the Borough of Lowestoft.

GENTLEMEN,

During the year 1896 the following analyses were made by me under the above Act. I also show the per centage of adulteration compared with the per centage of adulteration all over England.

			Total number.	Adlstration.	Per cent.	Per cent in England.
Butter	...	...	24	1	4.1	10.4
Milk	...	.	52	10	19.2	11.5
Lard	...	...	1	0	0.0	5.4
Pepper	...	...	2	0	0.0	.6
Beeswax	...	...	2	0	0.0	0.0
Whiskey	}	...	2	1	50.0	17.7
Gin		...				
Beer	...	...	1	0	0.0	6.2
Total	...	...	84	12	14.2	9.3

The highest per centage of adulteration here is spirit, showing 50% but as there were only two samples taken it is not right to take that as an average of the spirits sold in your Borough.

As regards the high per centage of adulteration of milk, the majority were deficient of cream to only 5% and the others were from that to 16 per cent.

It is remarkable that according to the Somerset House Standard no water has been added to milk in Lowestoft during 1896,

The other articles submitted appears very favourable.

Yours faithfully,

J. NAPIER,

Public Analyst

There was one prosecution and conviction during the year for selling milk deprived of a portion of its cream, when a fine of £1 and costs was inflicted.

INSPECTORS' DEPARTMENT,

Town Hall,

February, 1897.

Sanitary Inspector's Report of Work done in 1896.

Premises Inspected	...	...	...	...	2000
Re-inspected	...	...	...	...	1500
Defective Pan Closets	...	...	...	...	29
Drains Repaired	...	...	...	...	21
Houses Tested	...	...	...	...	222
Privies joining up to fireplaces	..	...	...	...	45
Smoke Nuisances	...	...	...	...	1
Manure Heap Nuisances	...	...	...	...	22
Blocked W.C's.	...	...	...	...	1
Privies under bedrooms abolished	...	...	...	...	9
Privies converted into W.C's	..	...	...	...	122
Defective Drains	...	...	...	...	54
W.C's. supplied with water	...	...	...	...	13
Blocked Drains	...	...	...	...	47
Privies (brought through houses) converted	...	...	...	...	6
New Drains laid	...	...	...	...	23
Defective Traps repaired	...	...	...	...	46
Drains Trapped	..	...	...	...	31
Drains Ventilated	...	...	...	...	141
Drains Re-tested	...	...	...	...	265
Down pipes connecting into drain and acting as ventilators					
under window, altered	...	...	...	...	29
Privies Ventilated	...	...	...	...	47
Defective Privies repaired	...	...	...	...	125
Defective Yards	..	...	...	...	1
Water Tested Drains	...	...	...	...	51
Sink pipes not trapped and connecting into drains, altered	...	...	...	...	15
Pan Closets condemned	...	...	...	...	1
Privies white washed	...	...	...	...	13
Dead Wells abolished	...	...	...	...	4
Houses supplied with dust bins	...	...	...	...	14
Defective soil pipes replaced	...	...	...	...	6

66 Bake Houses have been regularly inspected and white-washed.

12 Slaughter Houses have been regularly inspected and frequent white washing ordered.

During the year 1896, 768 ships have been systematically inspected, and 39 have been white-washed and cleaned. There is a vast improvement in the cleanliness of shipping, especially the coal ships, which are regularly white-washed out several times a year, this is mostly carried out at Shields, and other colliery districts.

During 1896, 83 canal boats were inspected, 21 painted and cleansed.

I remain, Gentlemen,

Your obedient Servant,

PHILIP KETT,

Inspector of Nuisances.

PART 3.

SANATORIUM.

During the year 57 cases were under treatment in the Sanatorium, of these 52 were admissions during the year, five cases remaining in the Hospital on 31st December, 1895.

The following were the diseases treated:—

Typhoid Fever	...	...	...	22
Scarlet Fever	...	...	...	24
Diphtheria	...	...	...	11
				<hr/>
Total	...	...	...	57

There were only two deaths during the year, both of a malignant form of Typhoid Fever, one on 29th January and the other of 3rd February, all the cases of typhoid fever admitted in the early part of the year were of this very severe type.

Several times during the year I was unable to take in cases of infectious disease, as the premises as at present constructed do not admit of treating more than two different kinds of infectious disease at the same time ; plans have been passed and tender accepted (and the matter is only waiting the sanction of the Local Government Board), for the erection of the new South West Pavilion, when this is completed there will be few towns of the size of Lowestoft so well equipped for the isolation of infectious disease. A permanent staff, consisting of a caretaker, his wife who acts as matron, three nurses and laundress, is maintained and nurses are engaged from institutions as occasion arise.

A new hot water supply with bath room has been provided during the year for the administrative block.

The Laundry has been improved during the year, and gas laid on, a new mangle has been purchased. The great present want at the laundry is a hot water supply and a larger copper for boiling purposes, or better still some means of boiling by steam coils.

The wards are kept in constant readiness for patients. The heating arrangements of the large block are not as satisfactory as they should be, there being a great difficulty in maintaining an equable temperature. I would strongly suggest that some system of heating by means of hot water pipes be introduced, and the present large and at the same time wasteful and ineffectual fires, can be altered to small fireplaces for ventilation purposes only.

The ambulance is not at all a comfortable or suitable carriage, a new one should be procured and the old one used for carting infected clothing for disinfection.

A perusal of the accounts as presented by the Boro. accountant will show that the utmost care is taken in management of the institution, and although all are treated bountifully, waste is as far as possible eliminated, and I think there are very few Isolation Hospitals in the kingdom that are catered for at such a low price per head. No complaints have been received from patients during the year. The children are happy and very loth to leave when cured.

In my efforts in the management of the Sanatorium I have been well supported by the Matron, Mrs. Chambers.

classified according to DISEASES, AGES, and LOCALITIES.

TOTALS

The subjoined numbers have also to be taken into account in judging of the above records of mortality. See Note 5 on back.

e distric

* The heading of column 19 is left blank for the insertion of Influenza, or any other disease which it may be thought desirable to record.

NOTES ON TABLES A AND B.

- NOTE 1. Medical Officers of Health of "Combined Districts" must make a separate Return for the District of each District Council.
2. Medical Officers of Health acting for a portion only of the District of a District Council should write, in the heading of the Table, the designation of the Division for which they act.
3. The words "Urban," "Rural," or "Metropolitan" must be inserted in the appropriate space in the heading, according as the District is Urban or Rural, or is within the Metropolitan Area.
4. The "Localities" adopted for the purpose of these statistics should be areas of known population; such as parishes, groups of parishes, townships or wards.

As stated at the head of the first column in each Table, *Public Institutions* should be regarded as separate localities, and the deaths in them should be separately recorded. Workhouses, Hospitals, Infirmaries Asylums, and other establishments into which numbers of people, and especially of sick people, are received are Public Institutions for the purpose of these statistics.

5. *The deaths which have to be classified in this Table (A), and summed up in the horizontal line of "Totals," are the whole of those registered as having actually occurred in the several localities comprised within the Division or District.* But the registered number of deaths frequently requires correction before it can give an exact view of the mortality of a Division or District; and the two lowest horizontal lines are provided for the purpose of enabling Medical Officers of Health to indicate, to the best of their ability, what the extent of such corrections should be. Details concerning the corrective figures, *e.g.*, the institutions that have been considered, or the particular localities to which corrections apply, may appear in the text of the report or in supplementary tables.

Area and Population of the District or Division to which this Return relates.			
Area in Acres	..	2306	
Population (1891)	..	23151	
"	(Estimated to middle of 1896)	25590	
Death Rates.	General .. 13.2		per 1,000 Population estimated to middle of 1896.
	"Corrected Rate" 12.7		
	Infant (under one year of age) .. 124		per 1000 Births registered

In recording the facts under the various headings of Tables A and B, attention has been given to the notes endorsed on the Tables.

JOHN TUBB THOMAS, D. P. H., Medical Officer of Health.

(B) TABLE OF POPULATION, BIRTHS, AND OF NEW CASES OF INFECTIOUS SICKNESS, coming to the knowledge of the Medical Officer of Health, during the year 1896, in the Lowestoft Urban District; classified according to DISEASES, AGES, and LOCALITIES.

NAMES AND LOCALITIES adopted for the purpose of these Statistics ; Public Institutions being shown are separate localities. (See Note 2 on back of sheet.) (a.)	POPULATION AT ALL AGES.		Registered Births. (d.)	Aged under 5 or over 5. (e.)	NEW CASES,OF SICKNESS IN EACH LOCALITY, COMING TO THE KNOWLEDGE OF THE MEDICAL OFFICER OF HEALTH.													NUMBER OF SUCH CASES REMOVED FROM THEIR HOMES IN THE SEVERAL LOCALITIES FOR TREATMENT IN ISOLATION HOSPITAL												
	Census 1891. (b)	Estimated to middle of 1895. (c.)			1	2	3	4	5	6	7	8	9	10	11	12	13	1	2	3	4	5	6	7	8	9	10	11	12	13
FEVERS.													FEVERS.																	
Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus.	Enteric or Typhoid.	Continued.	Relapsing	Puerperal	Cholera.	Erysipelas.	Measles.		Smallpox.	Scarlatina.	Diphtheria.	Membranous Croup.	Typhus.	Enteric or Typhoid.	Continued.	Relapsing	Puerperal	Cholera.	Erysipelas.							
NORTH		7233		Under 5		5	8								1			2	1											
				5 upwds.		18	14			10			2		6	1			8	6				3						
SOUTH		5852		Under 5		2	2			1						8							1							
				5 upwds.		2				6			1		2	12			1				3							
EAST		5200		Under 5		4													1											
				5 upwds.		7				6					1				2				6							
WEST (H)		7295		Under 5		4	7			2					1															
				5 upwds.		13	15			9			1		7	2			8	3			4							
PORT				Under 5																										
				5 upwds.						1													1							
HOSPITAL				Under 5																										
				5 upwds.						1									1				1							
TOTALS	23151	25590	866	Under 5		15	17			3					1	9			3	1			1							
				5 upwds.		40	29			33			4		16	15			20	9			18							

"Notification of Infectious Disease" is compulsory in the District—Since February 1890. Besides the above-mentioned Diseases, insert in the columns with blank headings the names of any that are notifiable in the District, and fill the columns accordingly. Measles notified for first time in 1896. State here the name of the Isolation Hospital used by the sick of the District. Mark (H) the Locality in which such Hospital is situated; The Lowestoft Sanatorium, Rotterdam Road, Lowestoft.

NOTES ON TABLE B.

(See also Notes on back of Table A.)

- NOTE 1. The present *Table B.* is concerned with population, births, and sickness (not with mortality) in the district or division to which the Table relates.
2. As stated in the heading of Col. (a), *Public Institutions* should be regarded as separate localities, and the new cases of sickness in them should be separately recorded. Workhouses, Hospitals, Infirmaries, Asylums, and other establishments into which numbers of people, and especially of sick people, are received, are Public Institutions for the purpose of these statistics.
3. *Comments on any unequal incidence of notifiable disease upon the several localities, and considerations as to the local incidence of consumption and other prevalent diseases, should be made in the text of the report.*

METEOROLOGY

OF

LOWESTOFT

IN

1896.

The Medical Officer of Health is under a deep debt of
obligation for this Report which has been very
kindly prepared

BY

S. H. MILLER, Esq., F.R.A.S., F.R. Met. Soc., etc.,

From his observations made at Bryn-y-mor, Lowestoft.

Notes on the Weather of 1896.

JAN. The weather generally was fair, but frequently hazy, *i.e.* between the 1st and 5th, and 21st to end of month. Hoar frost occurred five times after the 20th. The rain fall was light and no snow was recorded. On 15th there was a heavy squall but the wind force only "a strong breeze."

FEB. This was a really fine month—with only about one-third of an inch of rain, and no snow nor gale. A slight frost occurred on six days. "Fair" or "fine" was noted on 15 days.

MAR. South-westerly and Westerly breezes prevailed—and there was a strong Northwester on the 6th. Warmth and humidity were the chief characteristics—frost was felt on two days only, and the evenings were very free from cloud for two thirds of the month. Rain fell on 22 days but not heavily.

APRIL. For two thirds of this month the barometer was above 30 inches and rain fell on 14 days, but not more than one-third of an inch on any day. The thermometer just touched the freezing point on 3rd and 15th only. Some hail on 12th and 13th with a fresh Northwester. The sky was only half obscured by cloud on the average. Vegetation forward. There were only three sunless days.

MAY. North-east winds prevailed but with no great force. The days were warm, sunny and dry—the temperature in the shade never fell below $34\frac{1}{2}$ degs., and once, on 5th, to $28\frac{1}{3}$ degs. on the grass. A thunderstorm on 20th brought a little rain. Only a third of an inch fell in the whole month—and during the *five months*, the total fall was only $5\frac{1}{2}$ inches. Vegetation suffered in consequence.

JUNE. This month opened with fine, warm and dry weather. A thunderstorm on 10th, then a copious rain fell—in two days, more than $\frac{3}{4}$ inch—Dry weather succeeded till the 23rd, when some showers fell. There were but two sunless days in the month. A strong Westerly wind on 30th.

JULY. A fine warm month with less than $\frac{3}{4}$ inch of rain. Slight thunderstorms on 8th and 14th. The mean barometer was a little above the average and the range small. There was one cloudy day, the 15th. A strong breeze from N-West, on 4th.

AUG. The weather was unsettled—the thermometer in shade only once rose above 70 degs. There were 17 rainy days—and the fall on 7th was equal to that of the whole month of Nov. following. Heavy thunderstorm at 11 p.m., on 7th. There was a deficiency of bright sunshine—the temperature of the air was below the average—the four last days were fair.

SEP. The weather was wet and gloomy for the first eight days and the night temperature low for the season. A thunderstorm occurred early on 9th, and on the 10th there was scarcely a break in the clouds. Although rain fell on 20 days, the total fall was considerably less than in most parts of the country—only about half the amount which fell at Brighton. There were Westerly gales 23rd to 25th—then the barometer rose to the highest point in the month which like its predecessor closed with fair weather.

OCT. Opened with fair weather and not much rain till the 9 h. Strong breezes from the West prevailed (*i.e.* from S.W. to N.W.) with a gale from S.W. on 6th. Rain fell on 19 days but not excessively. The barometer fell to its lowest point on 20th, and then the heaviest rain of the month ensued, and cold weather set in.

NOV. Half an inch of rain fell on 1st and 2nd; the weather was fair till 7th, then the sharpest frost of month occurred and some haze followed till 26th, when a strong gale from E. was experienced for three days. Sharp frost on morning of the 30th.

DEC. The weather was cloudy and dull—with daily rain from 2nd to 14th inclusive—no frost in the shade till 15th. The lowest temp. of month on 24th (25.°2). The rainfall was not heavy and snow fell on 17th only. The 28th was a stormy day, wind S.S.W. a.m. N. p.m. The 31st was a sunny day; temp. in shade nearly 50 degs.

SUMMARY. Snow fell on only one day in the year.

Perfectly clear sky on 40 days.

Overcast more or less on 123 days.

Gales on 10 „

The Barometer.

(Corrected for temperature and reduced to sea-level)

Month.	Mean pressure of the air in the month.	Highest in Month.	Date	Lowest in Month.	Date.	Mean Pressure for Latitude.	Difference from this mean in 1896.
	Inches.	Inches		Inches.		Inches.	Inches.
Jany.	30·357	30·82	9	29·20	14	29·936	+0·421
Feb.	30·326	30·68	3	27·70	20	29·940	+0·386
Mar.	29·776	30·25	10	28·746	3	29·880	—0·104
April	30·117	30·48	21	29·63	29	29·950	+0·167
May	30·223	30·44	25	29·71	20	29·981	+0·242
June	29·942	30·22	19	29·46	10	29·979	—0·037
July	30·005	30·30	11	29·66	26	29·958	+0·047
Aug.	30·002	30·20	10	29·60	25	29·945	+0·057
Sep.	29·769	30·46	30	28·99	22	29·935	—0·166
Oct.	29·693	30·44	1	29·11	20	29·893	—0·200
Nov.	30·138	30·57	24	29·17	15	29·890	+0·248
Dec.	29·842	30·32	27	28·74	6	29·945	—0·103
Mean	30·016					29·937	+0·079

The barometer is thus seen to have been above the average height on seven months of the year, but the mean difference in the year was only 8-100ths of an inch.

Result of observations of temperature and Rain at Lowestoft.

1896.	Temperature.							Rainfall.	
Month.	Highest	Lowest	Mean Temp. of air.	Mean Daily Range.	Max. in Sun's Rays.	Min. on Grass.	Mean humidity.	Monthly Fall.	Days of 0.1 inch and above.
	0	0	0	0	0	0	0-100	Ins.	
Jan.	50.8	25.0	39.0	9.0	89.8	24.0	90	1.24	17
Feb.	53.1	28.7	39.5	9.7	97.0	27.0	84	0.35	6
Mar.	59.8	29.5	43.6	12.8	105.0	27.0	84	2.54	22
April	68.3	31.0	45.8	14.5	123.0	25.0	84	1.18	14
May	65.0	34.5	49.1	12.1	118.0	28.3	82	0.38	5
June	74.3	43.0	59.2	14.6	128.2	35.0	79	1.28	8
July	77.0	45.0	60.6	16.1	126.9	38.0	73	0.74	10
Aug.	76.0	42.2	58.9	13.5	124.0	36.7	76	3.78	17
Sep.	67.6	40.2	56.4	10.4	116.4	34.3	83	3.64	20
Oct.	64.0	32.7	46.7	12.2	110.6	23.3	84	3.40	19
Nov.	50.7	26.7	41.5	9.2	98.0	20.1	82	1.40	8
Dec.	51.0	25.2	39.4	8.4	83.2	24.3	89	2.65	22
Mean temperature of the year				48.3	Total rain				22.58
				degs.	inches				168
									days.

Earth Temperature.

The highest and lowest readings of thermometers placed below the surface of the soil at depths stated below. These readings show extremes of the year, which for practical purposes are more important than the means.

1896.

BELOW SURFACE.	HIGHEST IN THE YEAR.	DATE.	LOWEST IN THE YEAR.	DATE.
1 foot	<div>0</div> <div>68.5</div>	26th July	<div>0</div> <div>36.5</div>	23rd Jan. 26th Feb.
2 feet	66.0	15th, 22nd and 26th July	36.0	23rd Jan.
4 feet	60.4	2nd Aug.	41.0	28th Feb.

The thermometer at 4 feet rose to 56 degs. on 8th June—reached its maximum, 60.4 degs., on 2nd Aug.—fell to 56 degs. on 26th Sep.—was down to 55.1 degs. on 30th Sep. and 42.2 on 31st Dec.

Report on direction of the Wind during 1896,

From which it will be seen that

N. to N.E. winds prevailed on 58 days. | S. to S. W., 92 days.

E. to N.E., 47 days. | W. to N.W., 139 days.

Days on which the Wind blew from the eight points indicated.

1896.	N.	N.E.	E.	S.E.	S.	S.W.	W	N.W.	Calm.	Winds of greatest force.
Jan.	1	6	—	3	3	4	3	10	1	W. NW.
Feb.	—	2	3	7	2	3	4	8	—	SW. SE.
Mar.	1	4	—	—	—	13	5	8	—	SW. NW.
April	3	4	2	1	1	2	3	14	—	SW. N.W.
May	3	21	1	—	1	1	1	3	—	N. NW.
June	2	6	1	4	2	9	1	5	—	SW. & W.
July	2	5	2	1	3	7	2	8	1	NW. & NNE.
Aug.	4	5	1	1	1	3	3	12	1	W. & NW.
Sep.	—	3	1	3	2	8	8	5	—	SW. to NW.
Oct.	2	3	1	1	1	11	5	7	—	SW. & ENE.
Nov.	1	4	6	4	—	2	4	9	—	ESE & NE.
Dec.	1	2	1	3	3	10	4	7	—	SW. to SE.
Total	20	65	19	28	19	73	43	96	3	

ANNUAL REPORT

OF THE

MEDICAL OFFICER OF HEALTH,

FOR THE

PORT SANITARY AUTHORITY OF LOWESTOFT.

1896.

“The Port Sanitary Authority” is “The Mayor, Aldermen and Burgesses of the Borough of Lowestoft acting by the “Council.” It exercises port functions in Waters abutting upon the Urban Sanitary District of Lowestoft, and the Rural Sanitary District of Mutford and Lothingland.”

The Limits of jurisdiction are :—

So much of the Port of Lowestoft as abuts on the sea-coast of the Borough, and of the Parish of Gunton, and of the Parish of Corton as far northwards as League Hole, together with Lake Lothing Inner Harbour below Mutford Dock, and the waters of the said Port within such Limits, and the place or places for the time being appointed as the Customs Boarding station or stations for such part of the said Port, and every other place for the time being appointed for the mooring and anchoring of Ships for such part of the said Port, under any regulations for the prevention of the spread of diseases issued under the authority of the Statutes in that behalf; and the watersides of the District of the said Port Sanitary Authority

constituted as aforesaid, and the docks, basins, harbours, creeks, rivers, channels, roads, bays and streams belonging to that part of the said Port, for which such authority is constituted as aforesaid. The following Riparian Districts are included (wholly or in part) in The Port Sanitary District. The Urban Sanitary District of Lowestoft. The Hundred of Mutford and Lothingland, being a Rural Sanitary District. Parishes :—Corton, Gunton, Carlton Colville and Oulton.

The floating population of whom no record was obtained at the census of 1891, is estimated to be at least 2000 souls.

The number of Fishing Boats on the Register at the end of 1896—479

Total number of Registered Vessels belonging to this Port—537

Amount of Shipping Inwards during the year 1896.

TABLE I.

		NUMBER.	TONNAGE.
Steam	Foreign	53	26906
Sailing	Cargo	95	11606
Steam	Foreign	0	
Sailing	Ballast	229	12044
Steam and Sailing	Coastwise	518	61431

The Foreign imports chiefly ice and timber: the former from Norway and the latter chiefly from Memel and Riga.

The boats in ballast chiefly from Belgian ports.

There was an increase in the Foreign cargo steamers during the year, and a decrease in Foreign cargo sailing ships. A decrease in Foreign ballast sailing ships. A decrease in the number of steam and sailing ships coast wise but an increase in the tonnage.

The total number of deaths registered as belonging to the Port or at sea amounted to 5, a decrease of 17 on the year 1895, all the cases were certified by inquest as from drowning.

Only one case of infectious disease was notified from the port,

viz : the cook of the S.S. Isle of France which came here from a German port with a cargo of sleepers for the Railway Company, the disease, was contracted in the foreign port from drinking polluted acrated waters. The man was removed to the Sanatorium and the cost of his keep paid by the owners of the ship.

Several fishermen were landed suffering from incipient typhoid fever, but the cases were not diagnosed before they left the boats so they were not notified as cases from the port. The disease was contracted in the Northern fishing ports.

Vessels of all kinds arriving in the port are regularly inspected and where in an unclean state orders given for cleansing, these orders were in all instances cheerfully obeyed. The wherries also are regularly inspected, there are still a number unregistered.

The difficulty as to landing patients suffering from infectious diseases has not yet been remedied. The patient from the S.S. Isle of France was landed with great difficulty and danger to his life.

